

# *OPTIM- A tool to optimize rf parameters in ring coolers*

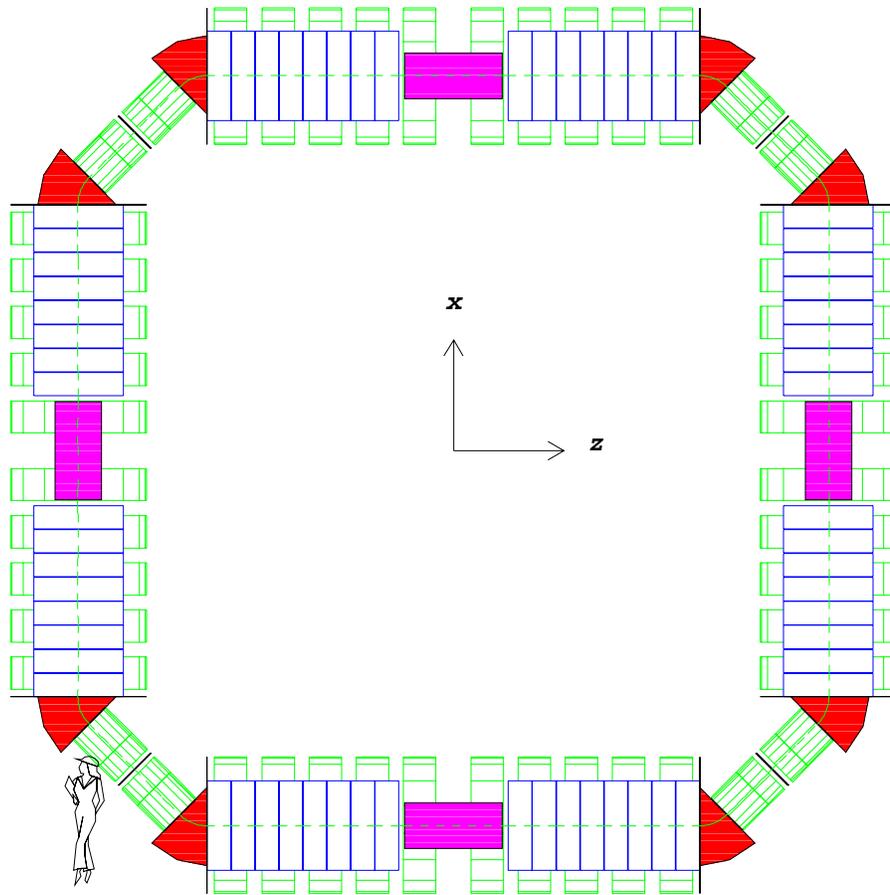
Rajendran Raja

25 Feb 03

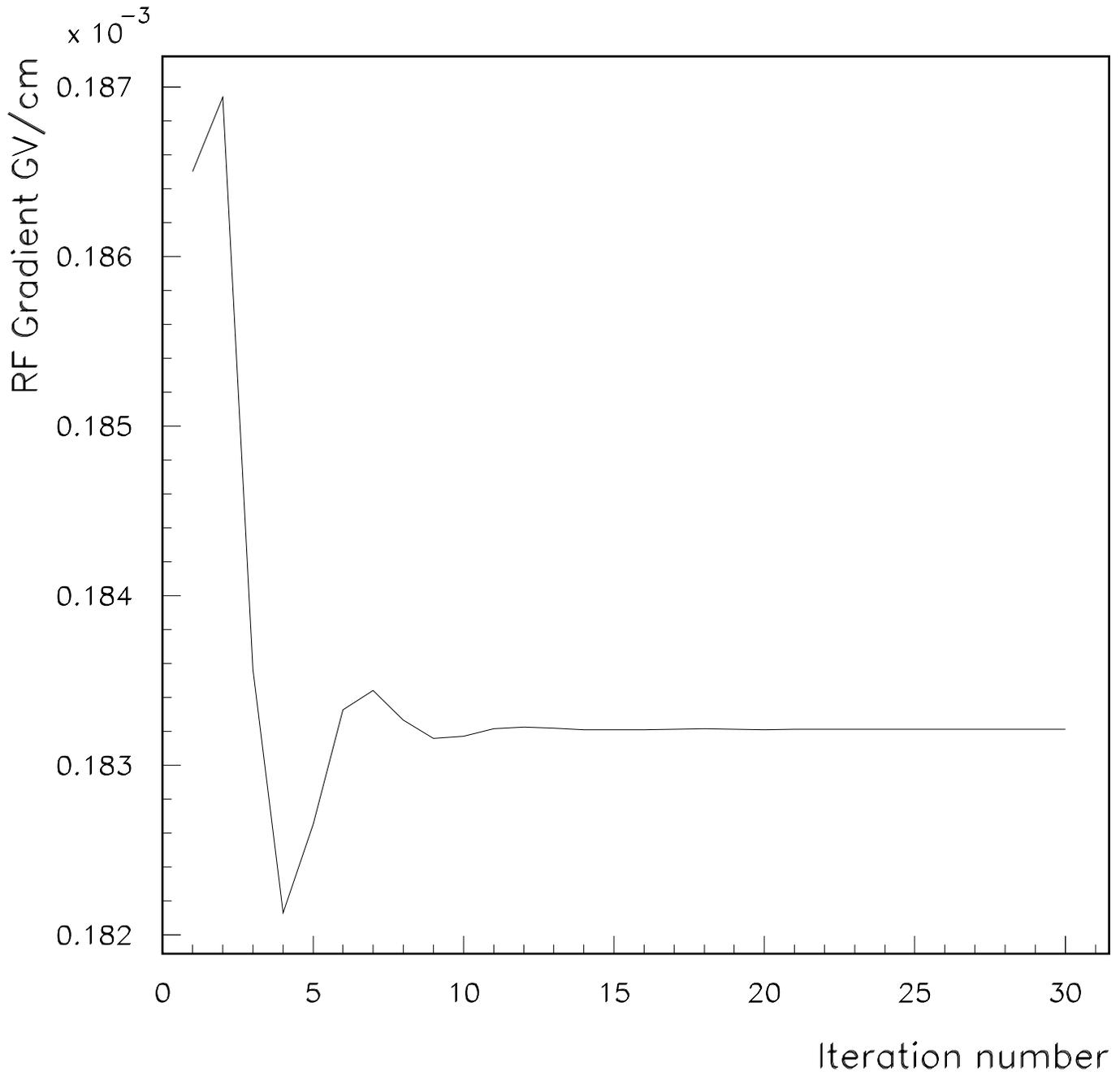
# *OPTIM*

- Separate program that calls Geant.
- Has interface to MINUIT
- Present algorithm
- Remove all absorbers.
- Acquire times at which on momentum particle crosses all rf volumes (16x4)
- Start particle at beginning of quadrant and track one turn
- Work out rf frequency for a harmonic number =28
- Replace main absorbers. No wedeges.
- Iterate One Turn with no stragglng or multiple scattering or decay.
- Re-work out the times.
- Re calculate RF gradient such that loss per absorber = gain / quadrant.
- Re work out the rf frequency. Iterate 30 times till convergence.
- RF entry at -15 degrees and exit at ~ 75degrees. Sin Wave.

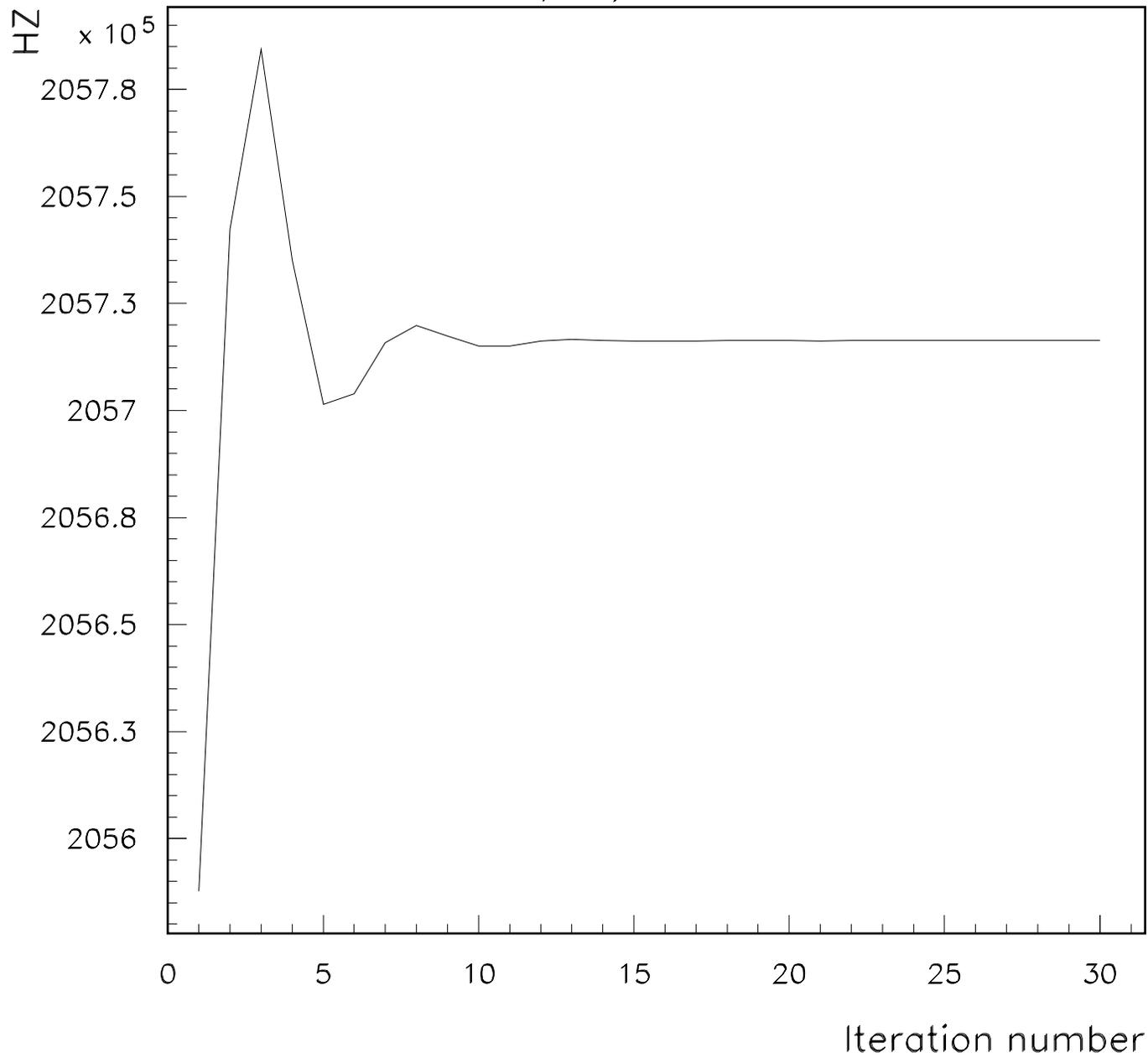
**ARTE RING COOLER-NEW SCHEME FROM BALBEKOV** 4/02/03

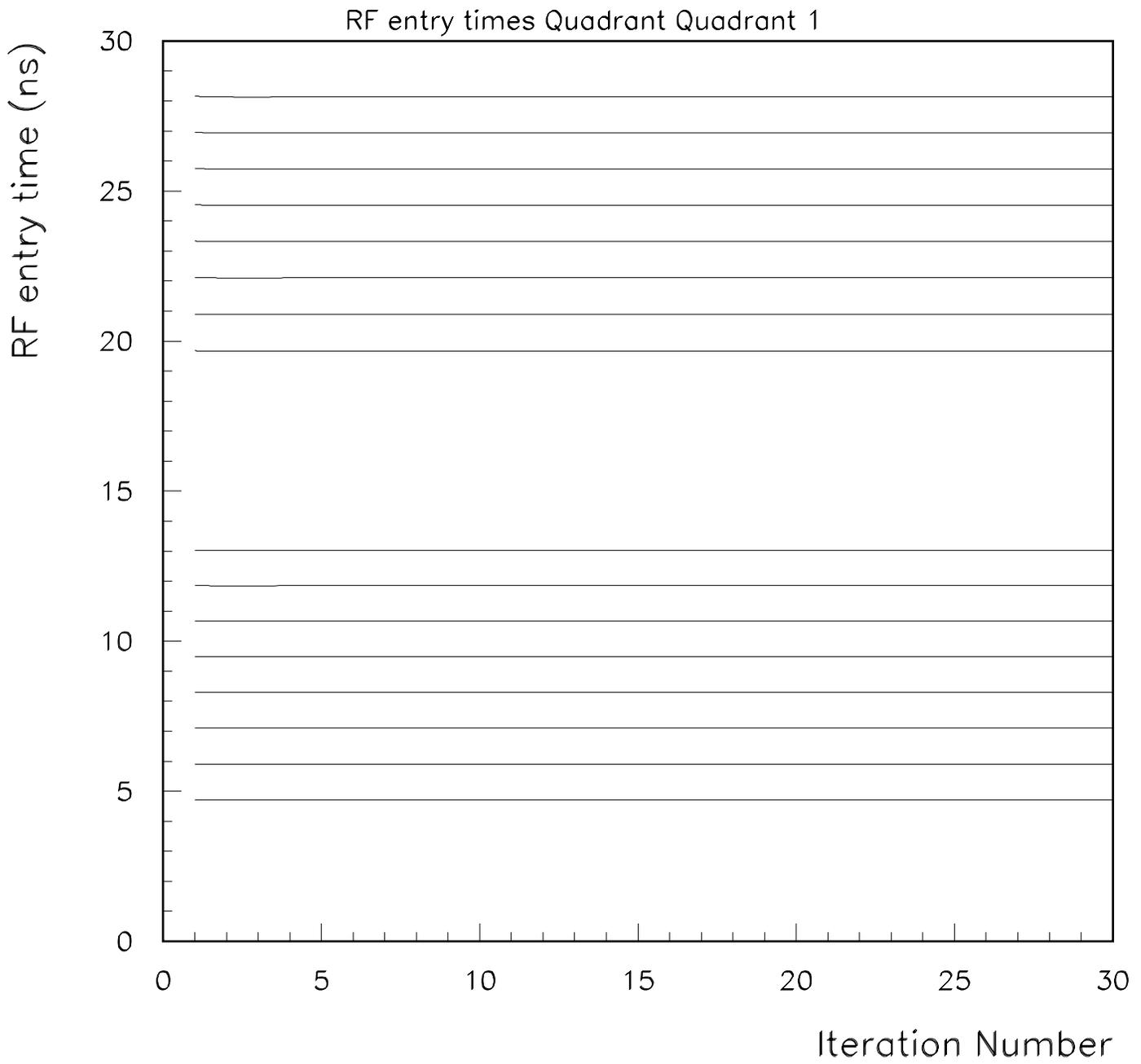


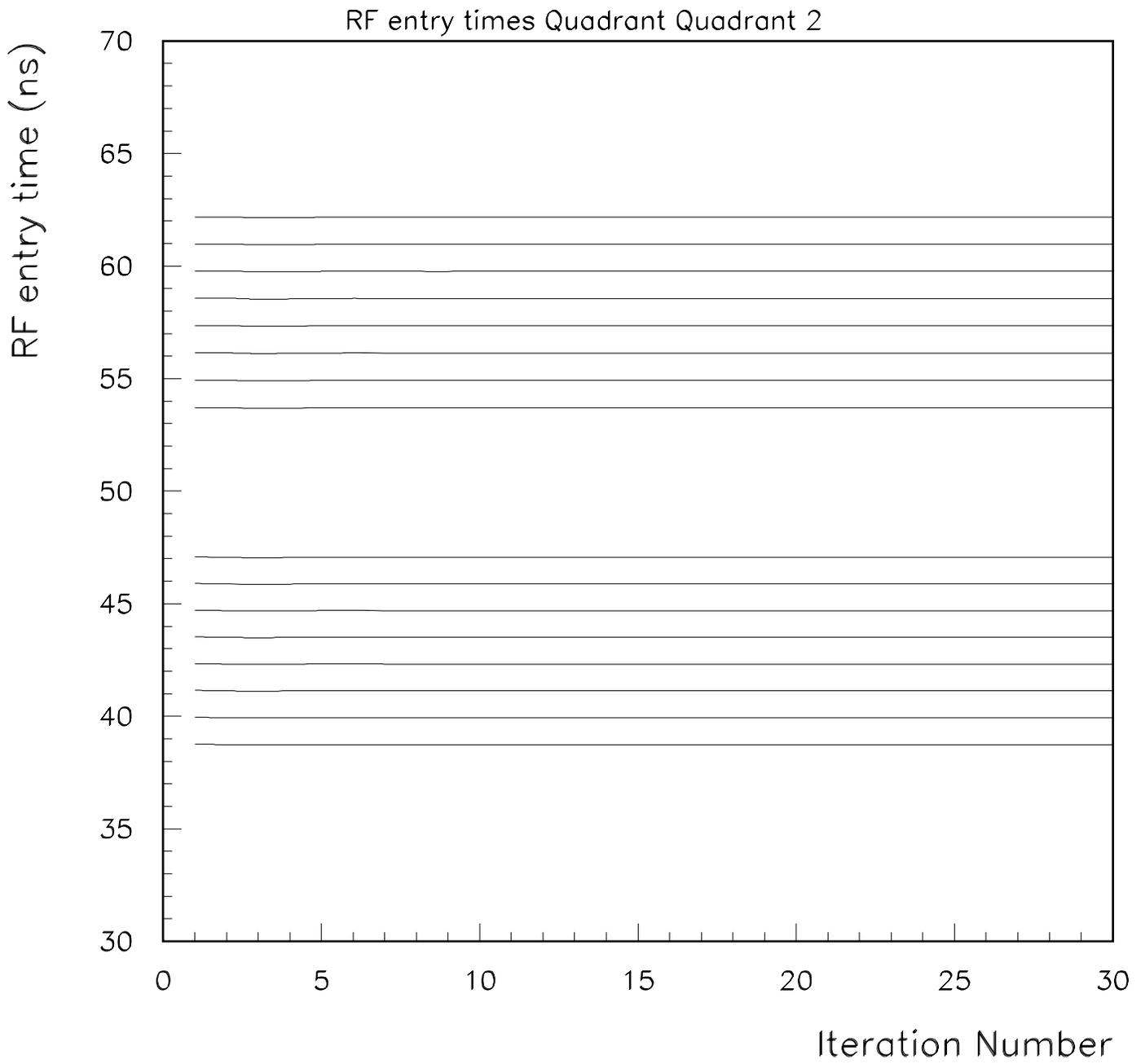
2003/02/24 15.16

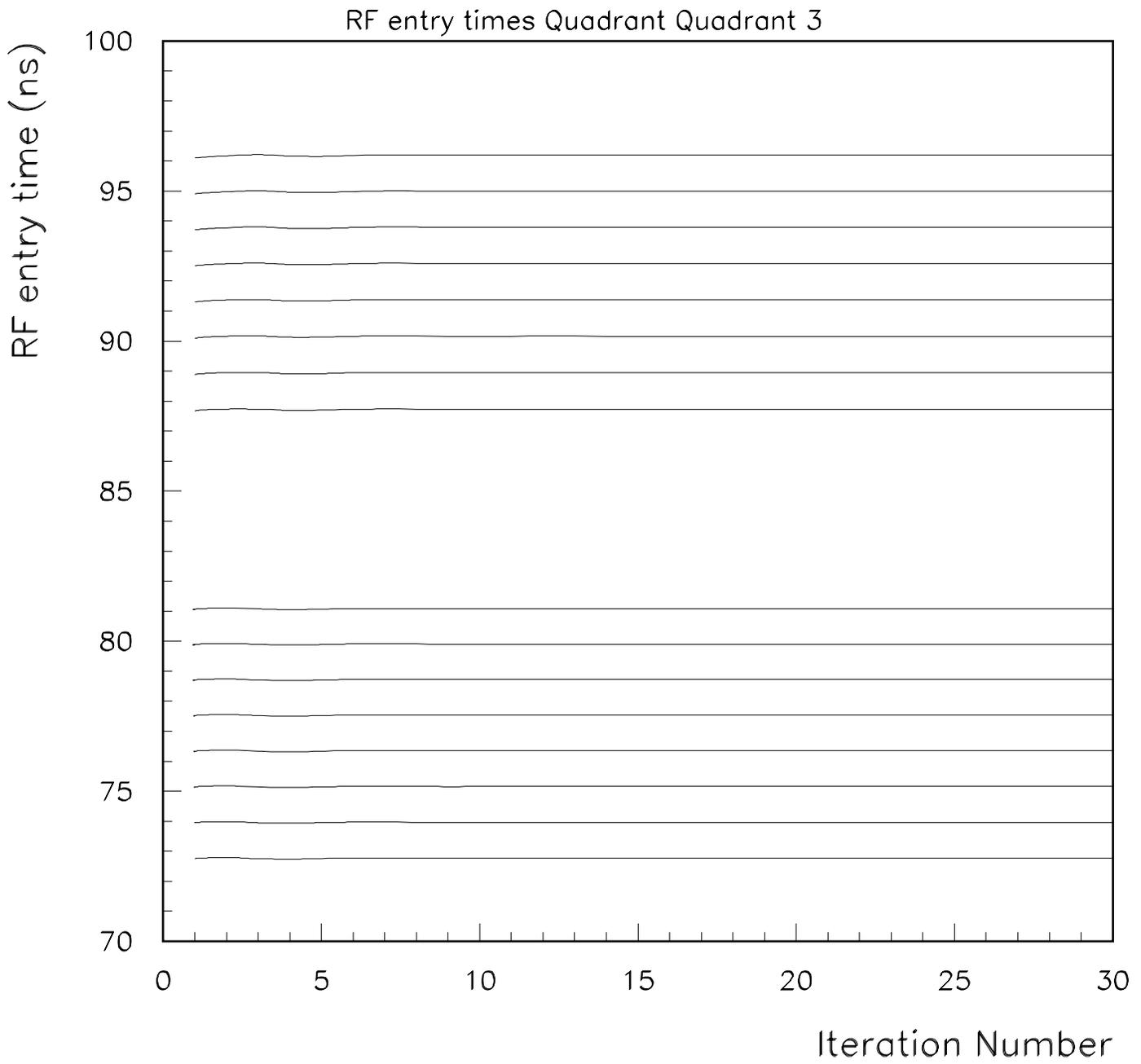


RF Frequency evolution



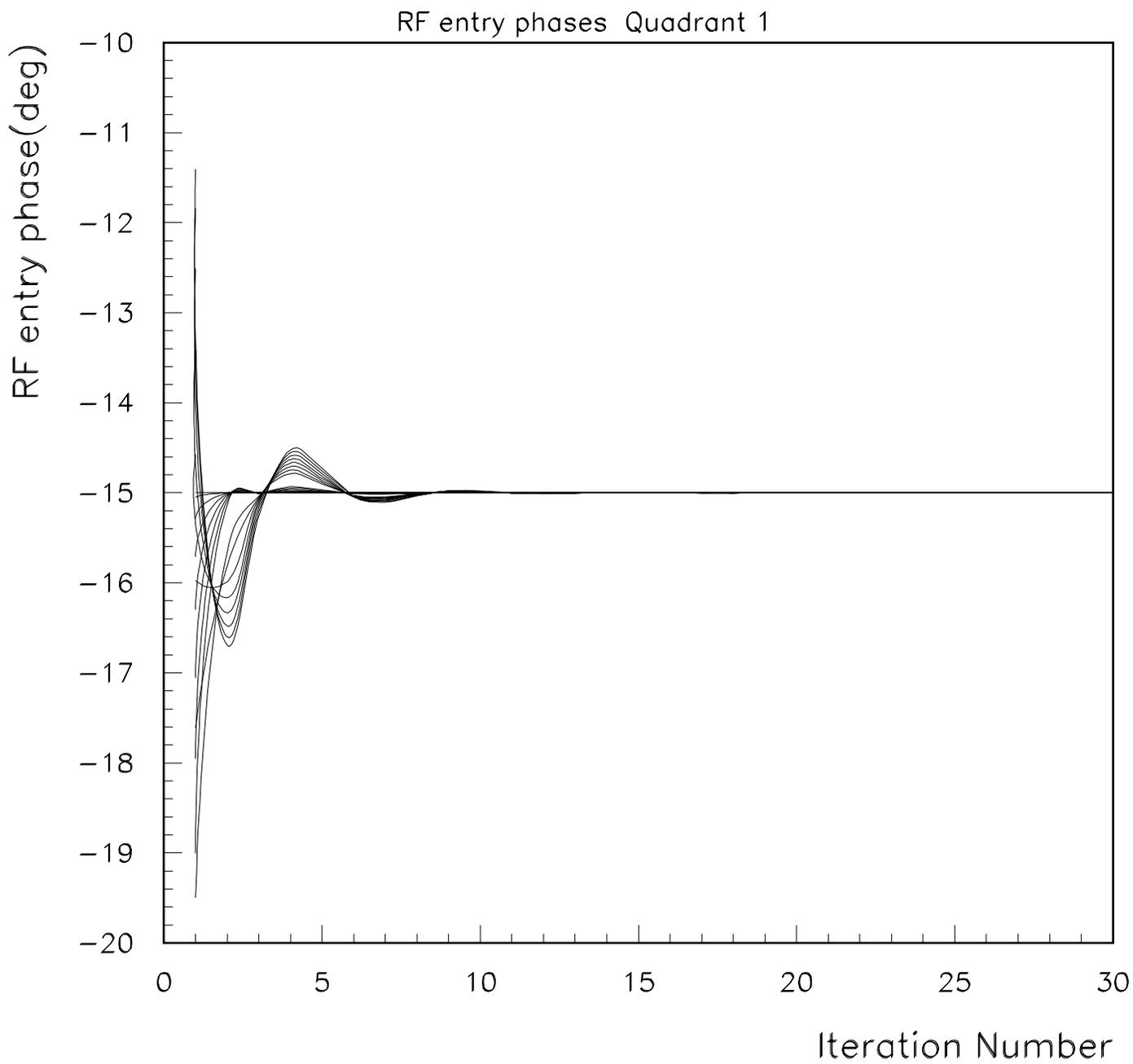




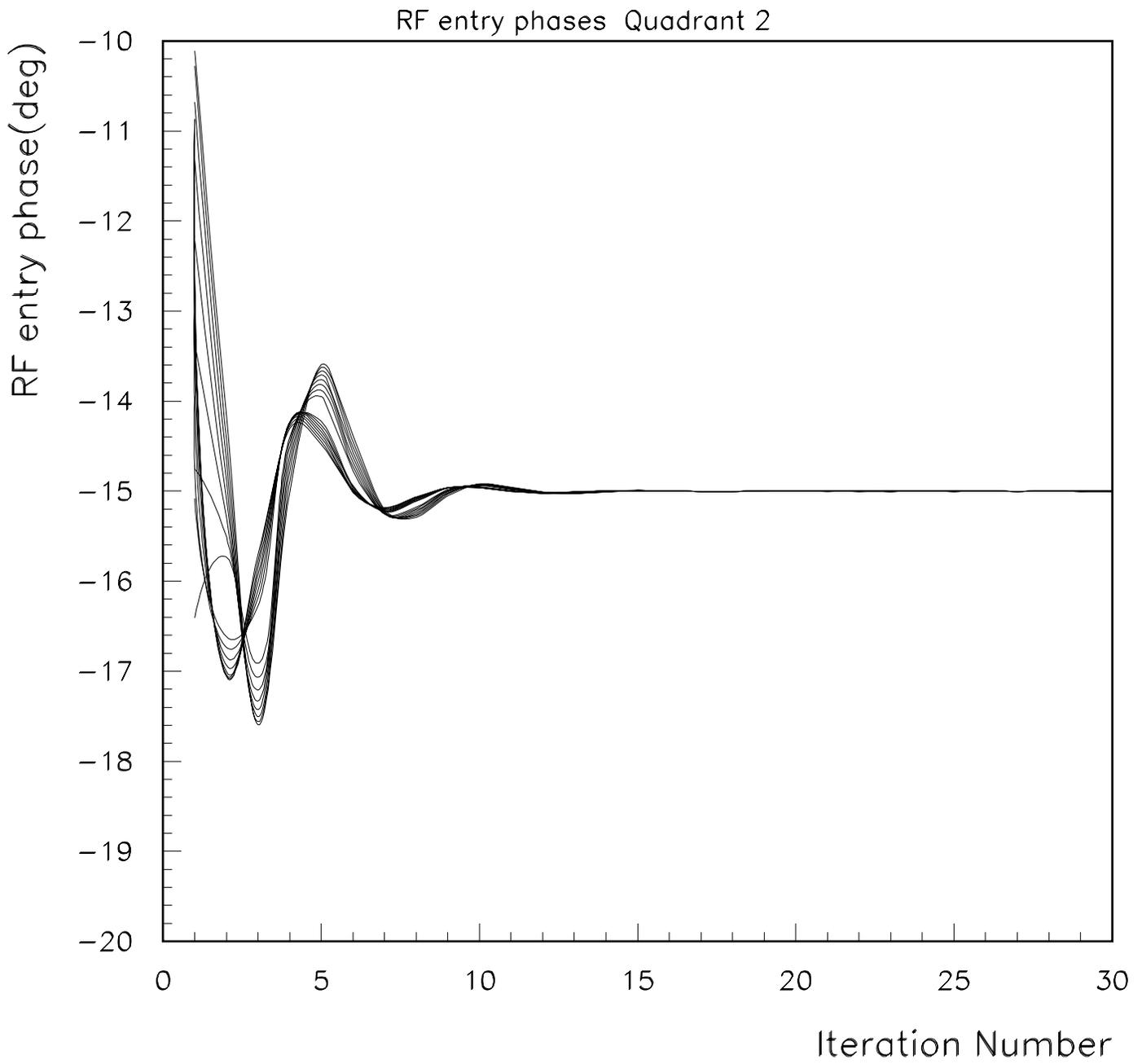




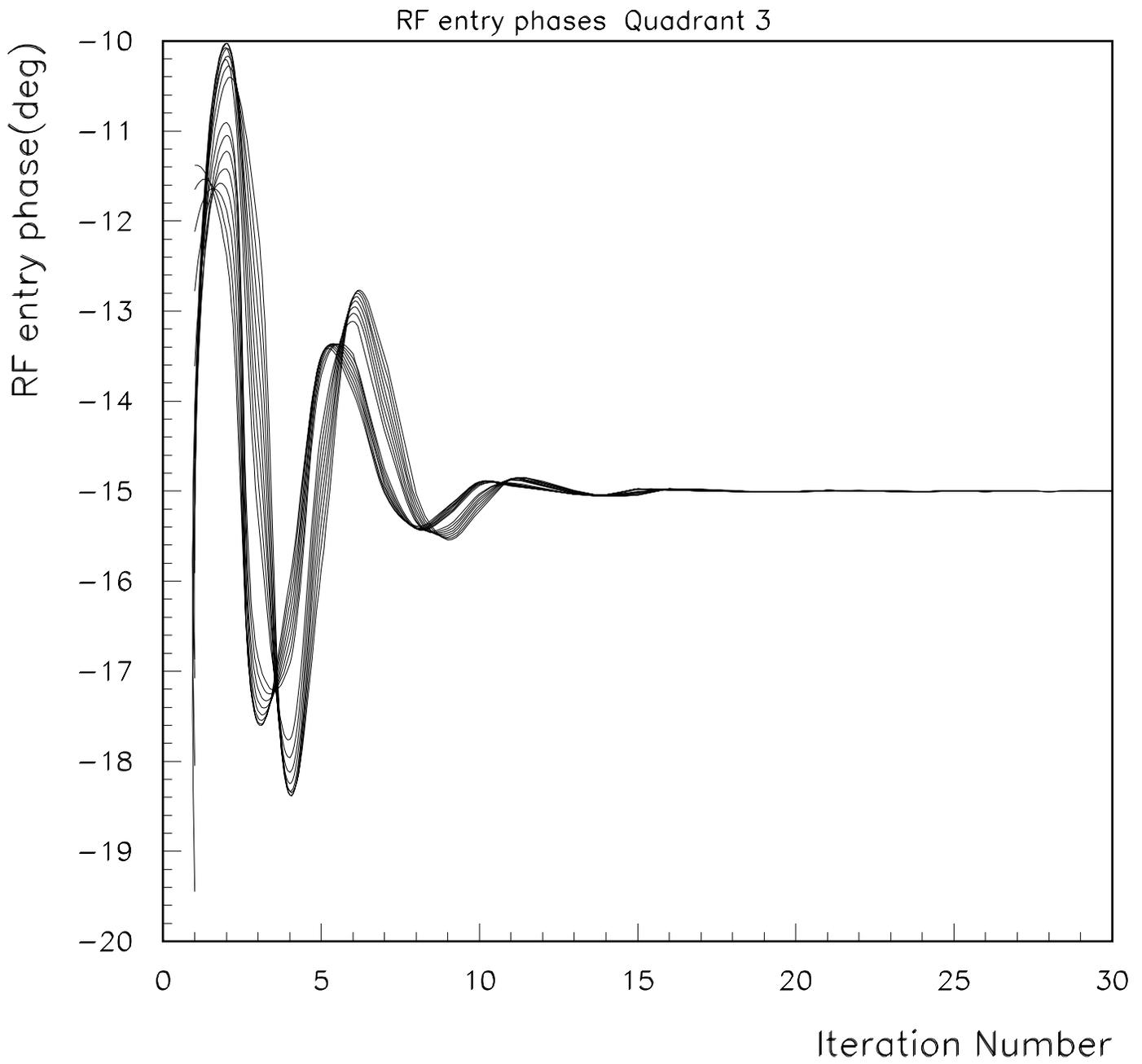
2003/02/24 15.16

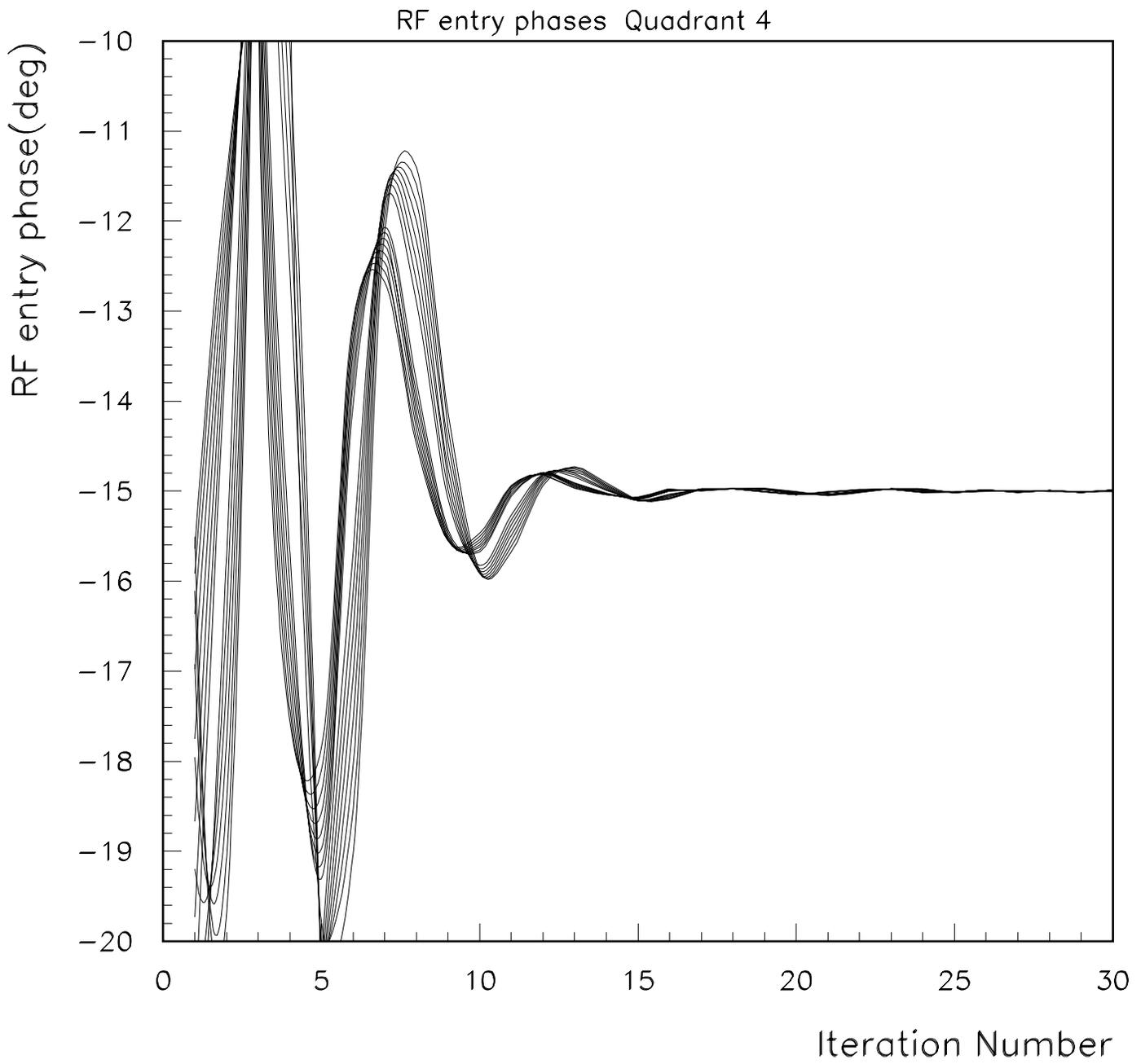


2003/02/24 15.16

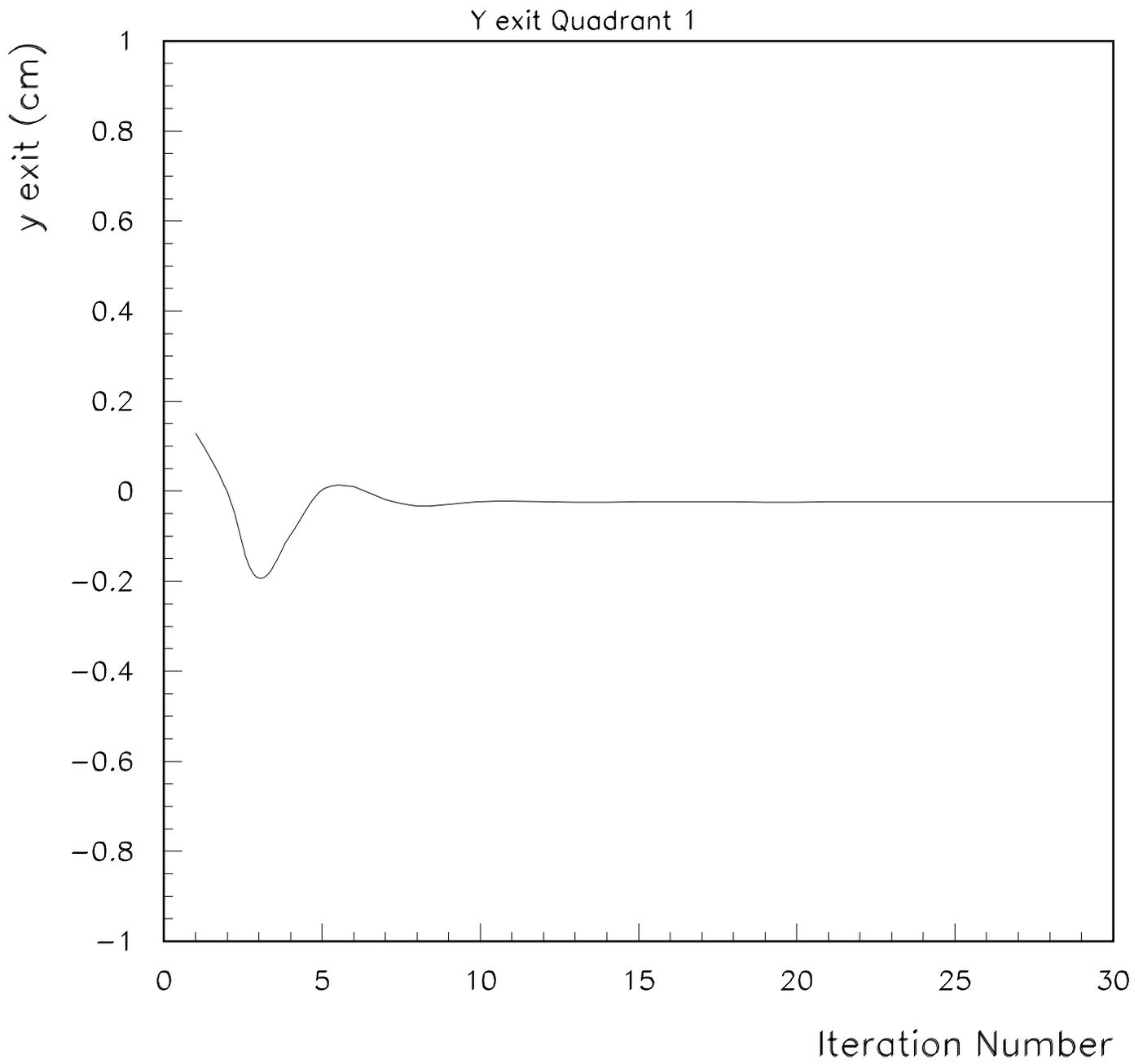


2003/02/24 15.16

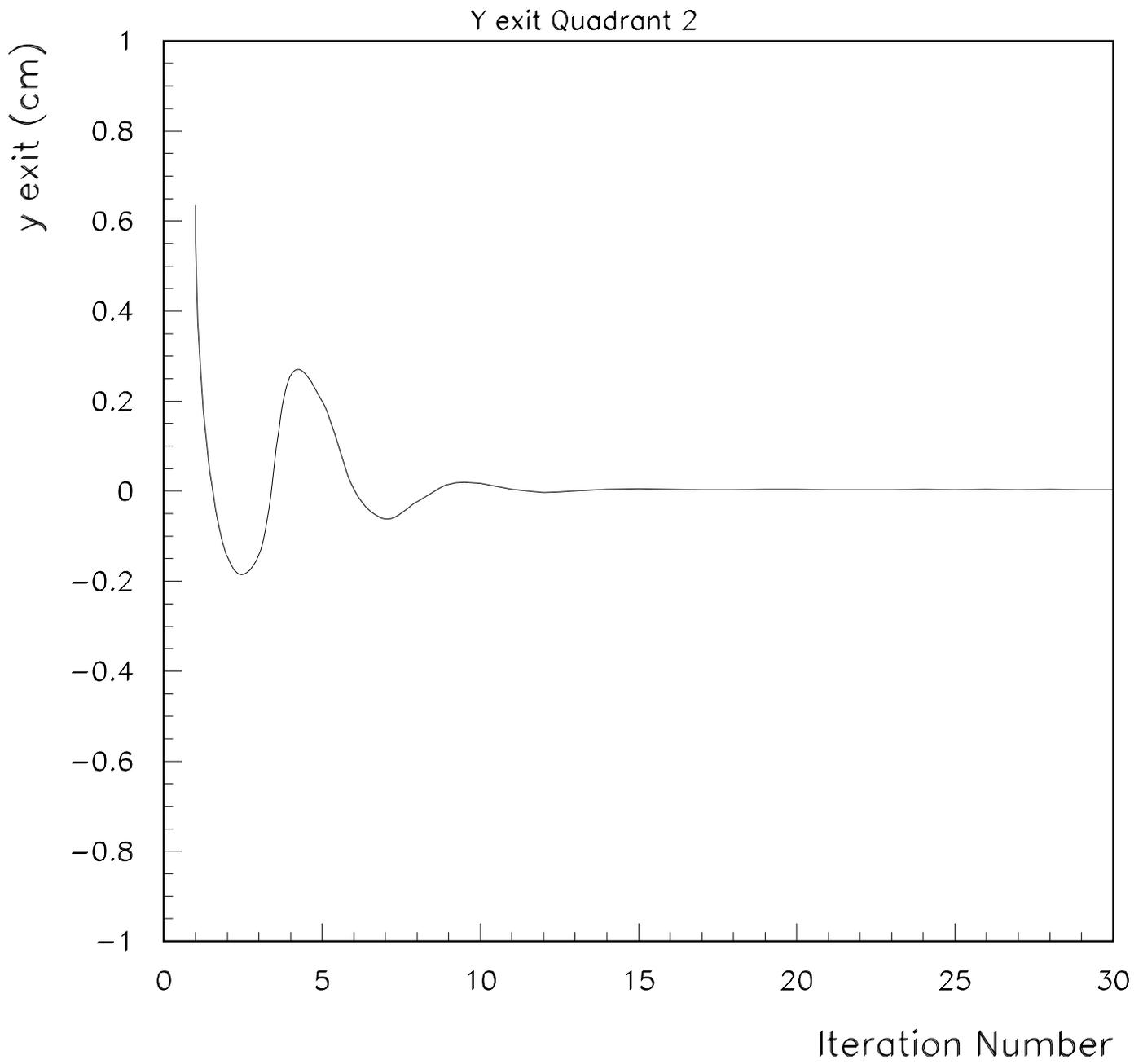




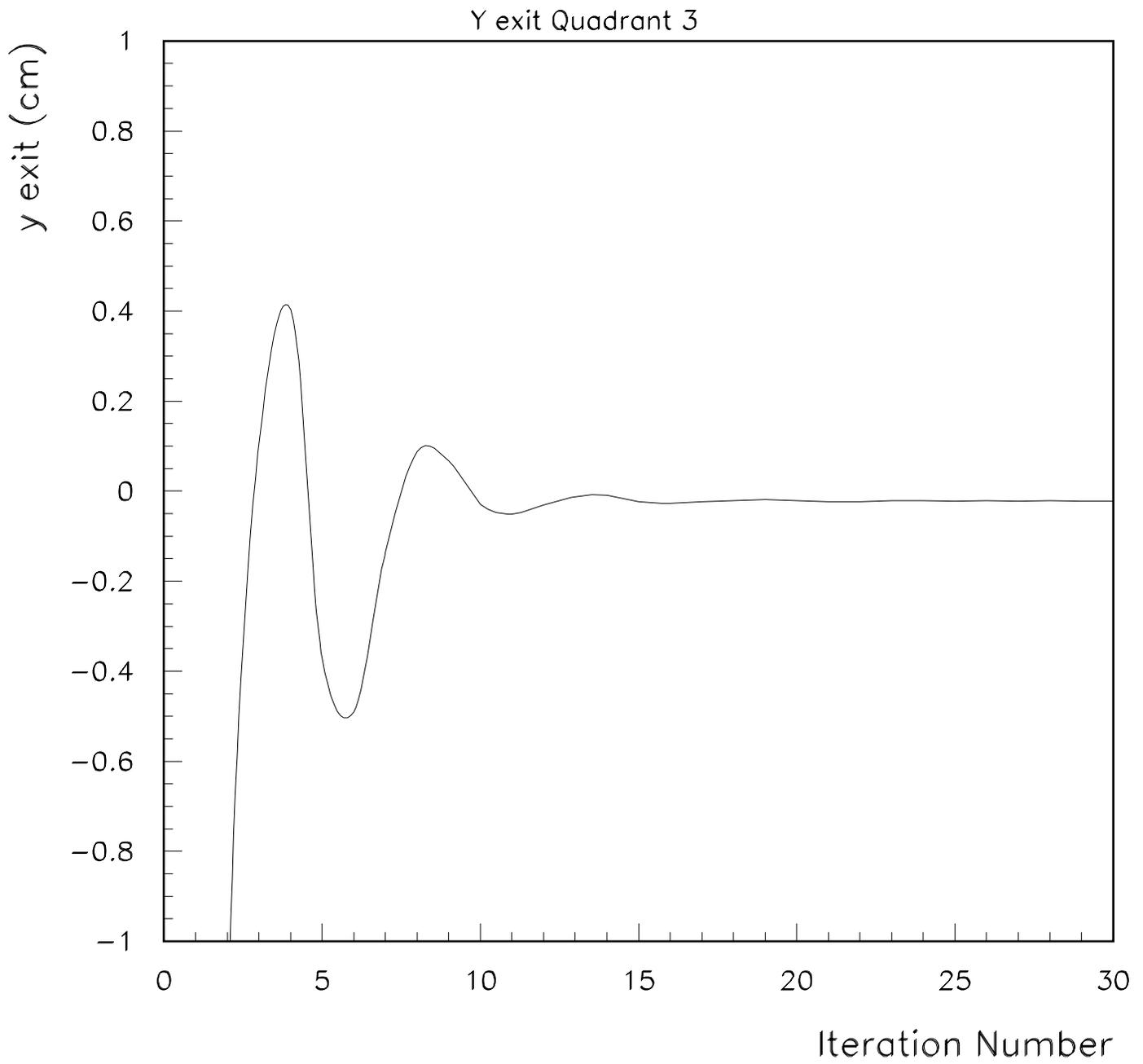
2003/02/24 15.16



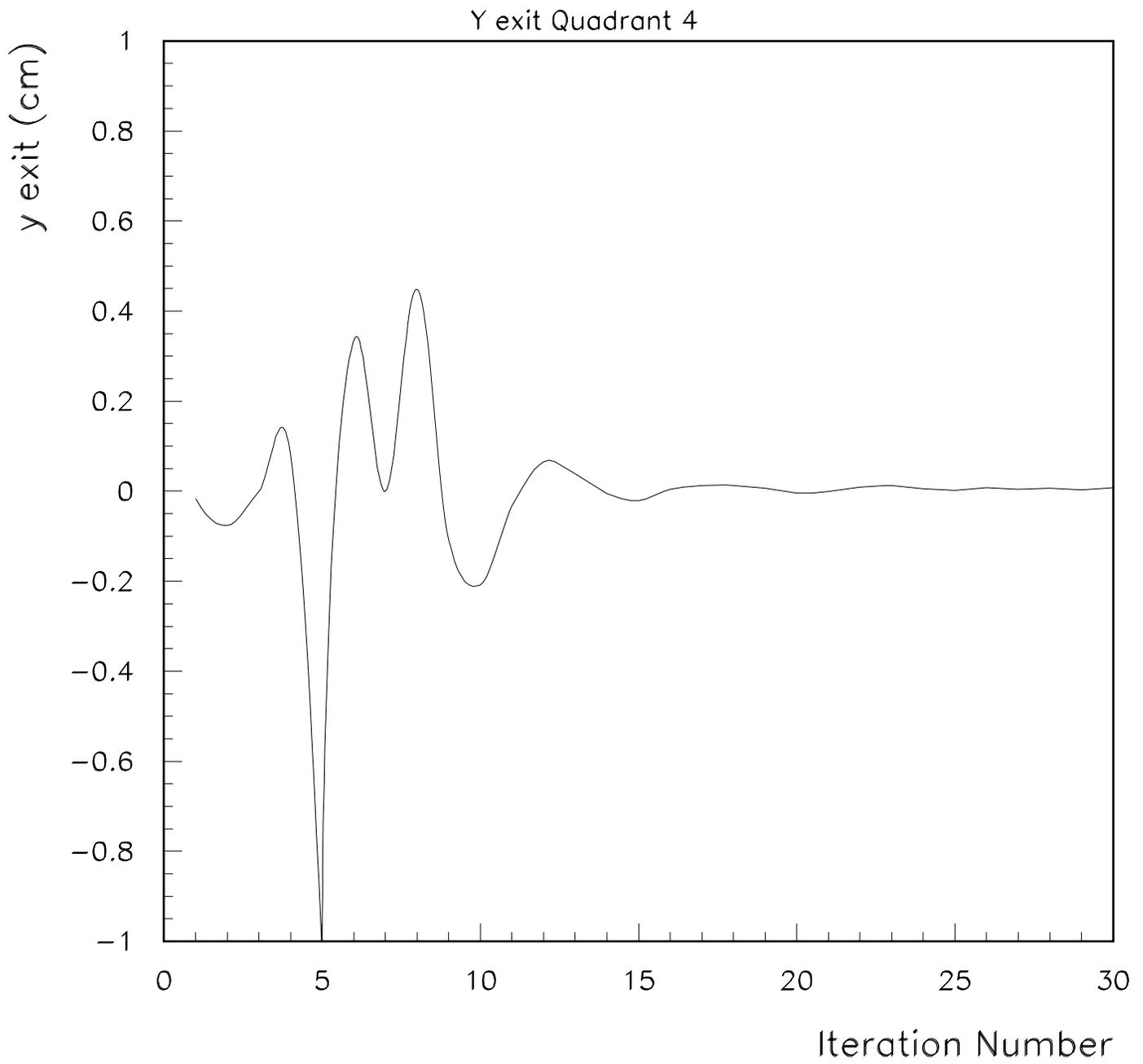
2003/02/24 15.16

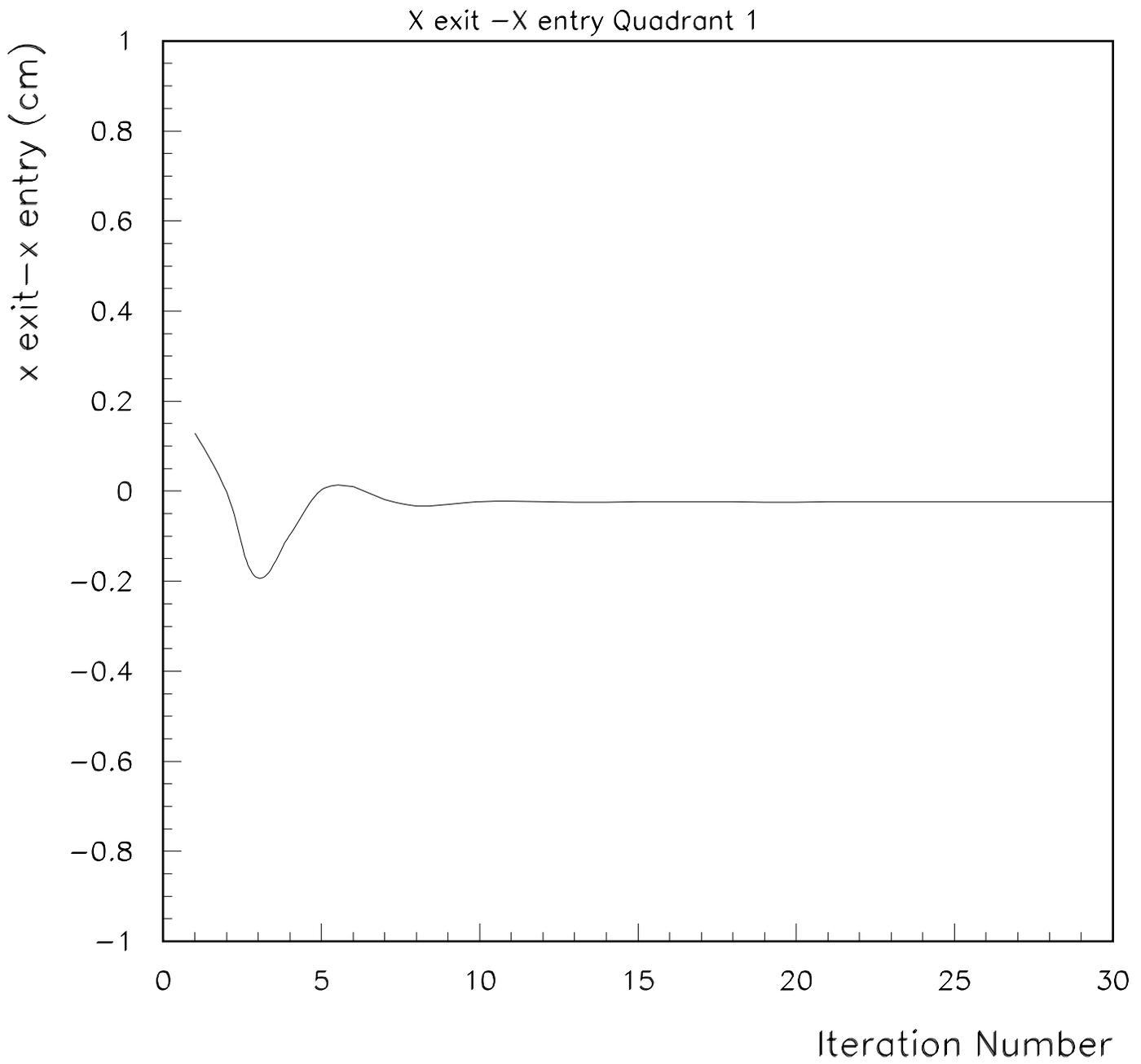


2003/02/24 15.16

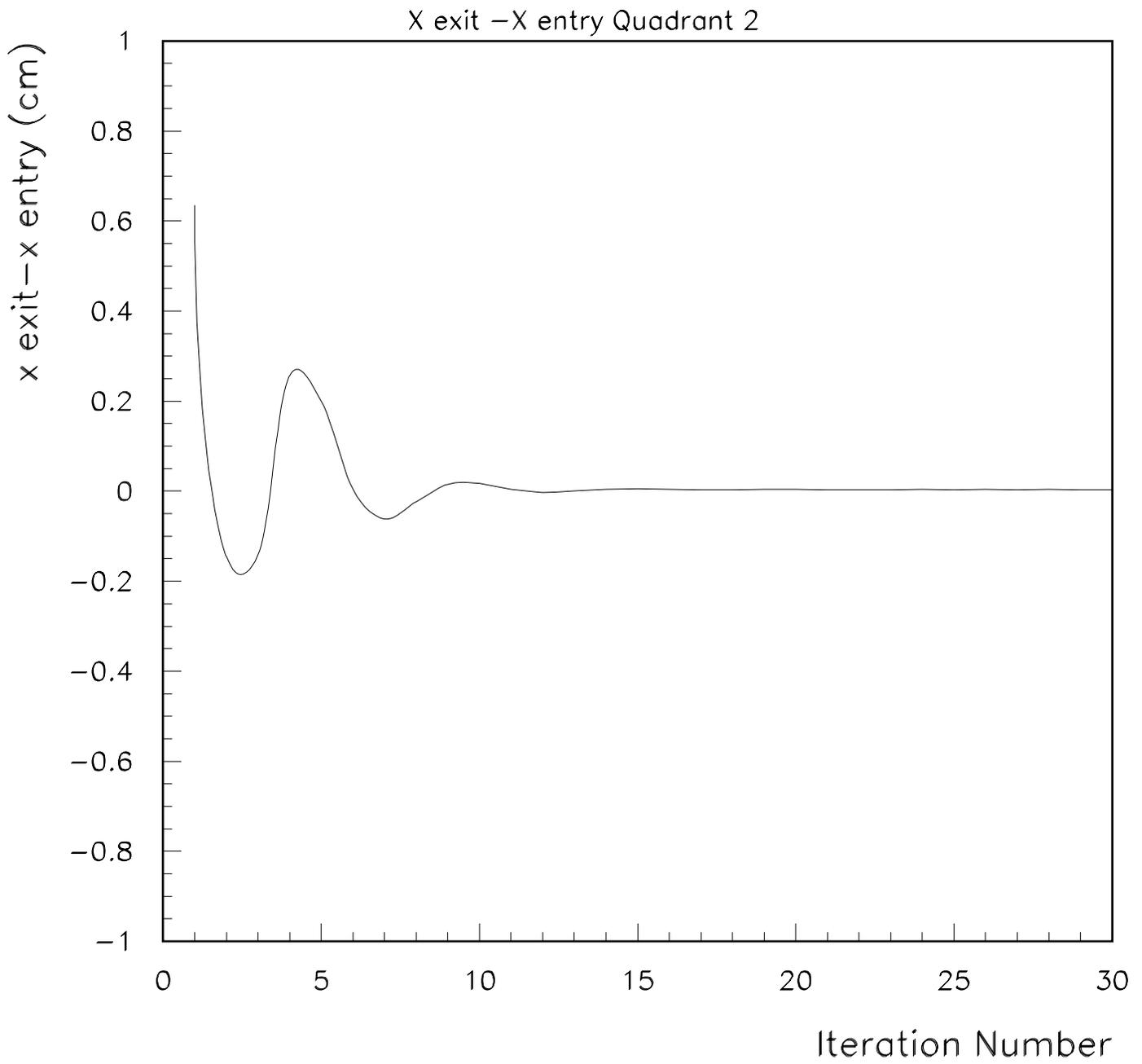


2003/02/24 15.16

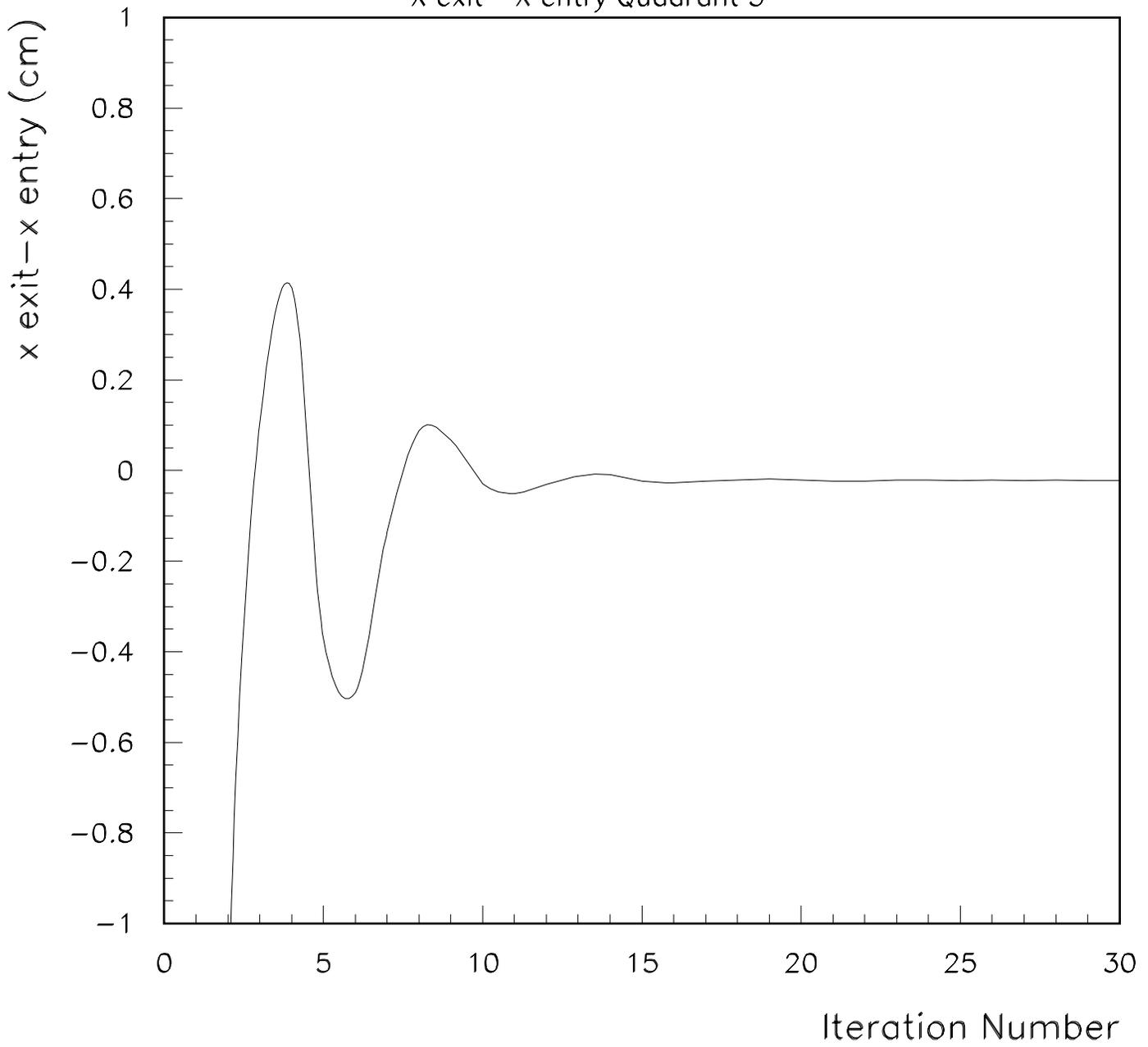


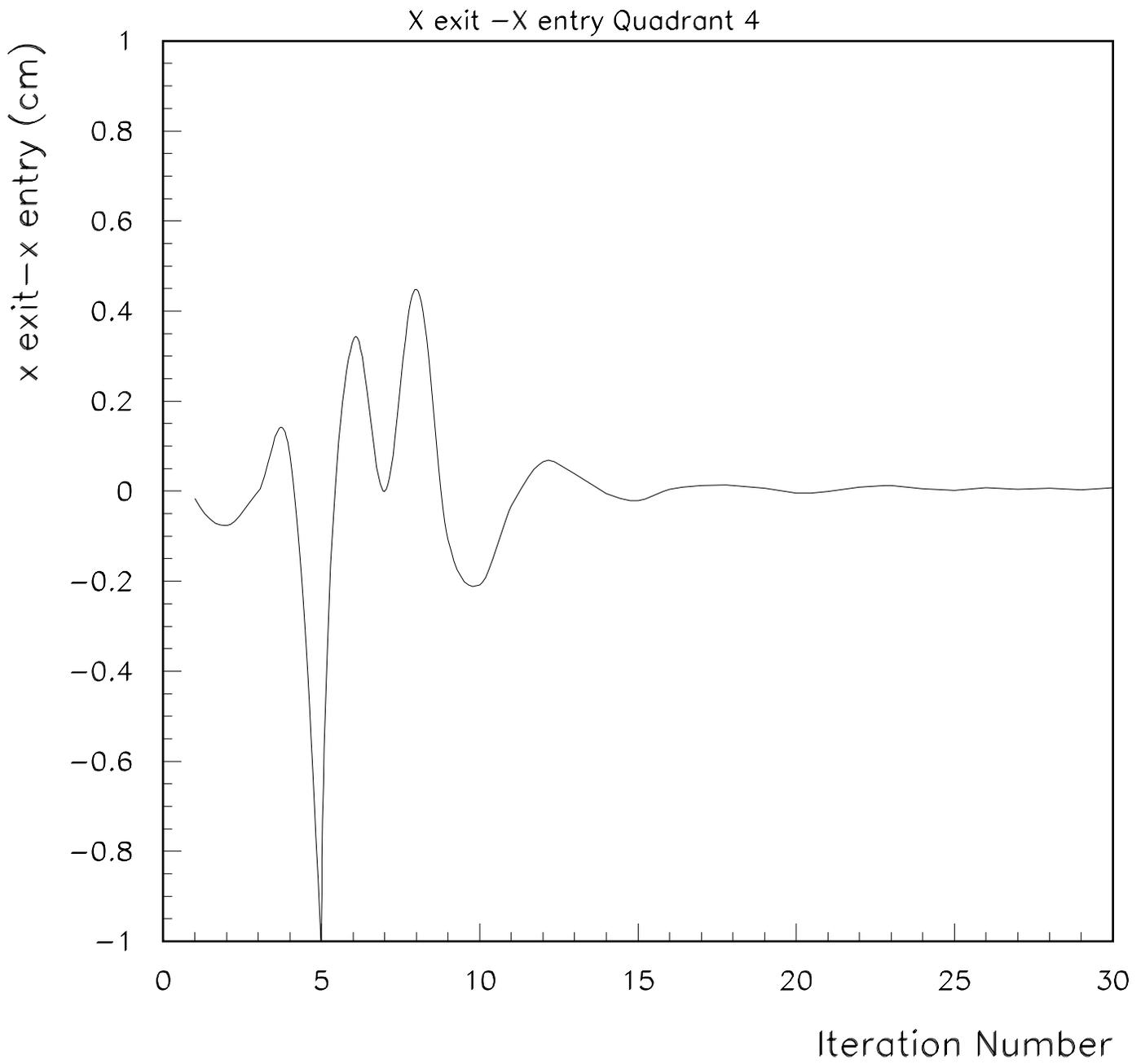


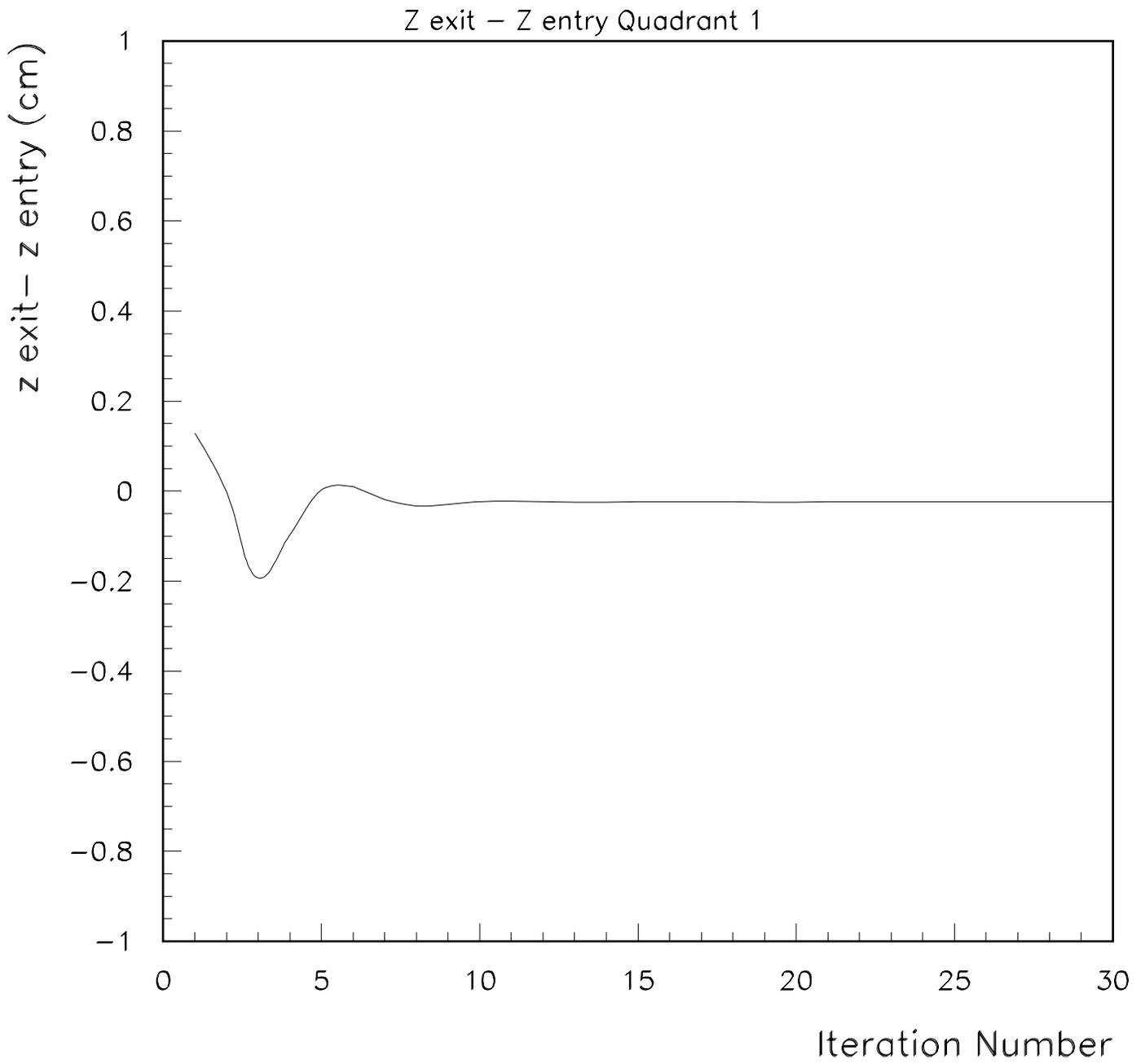
2003/02/26 12.48



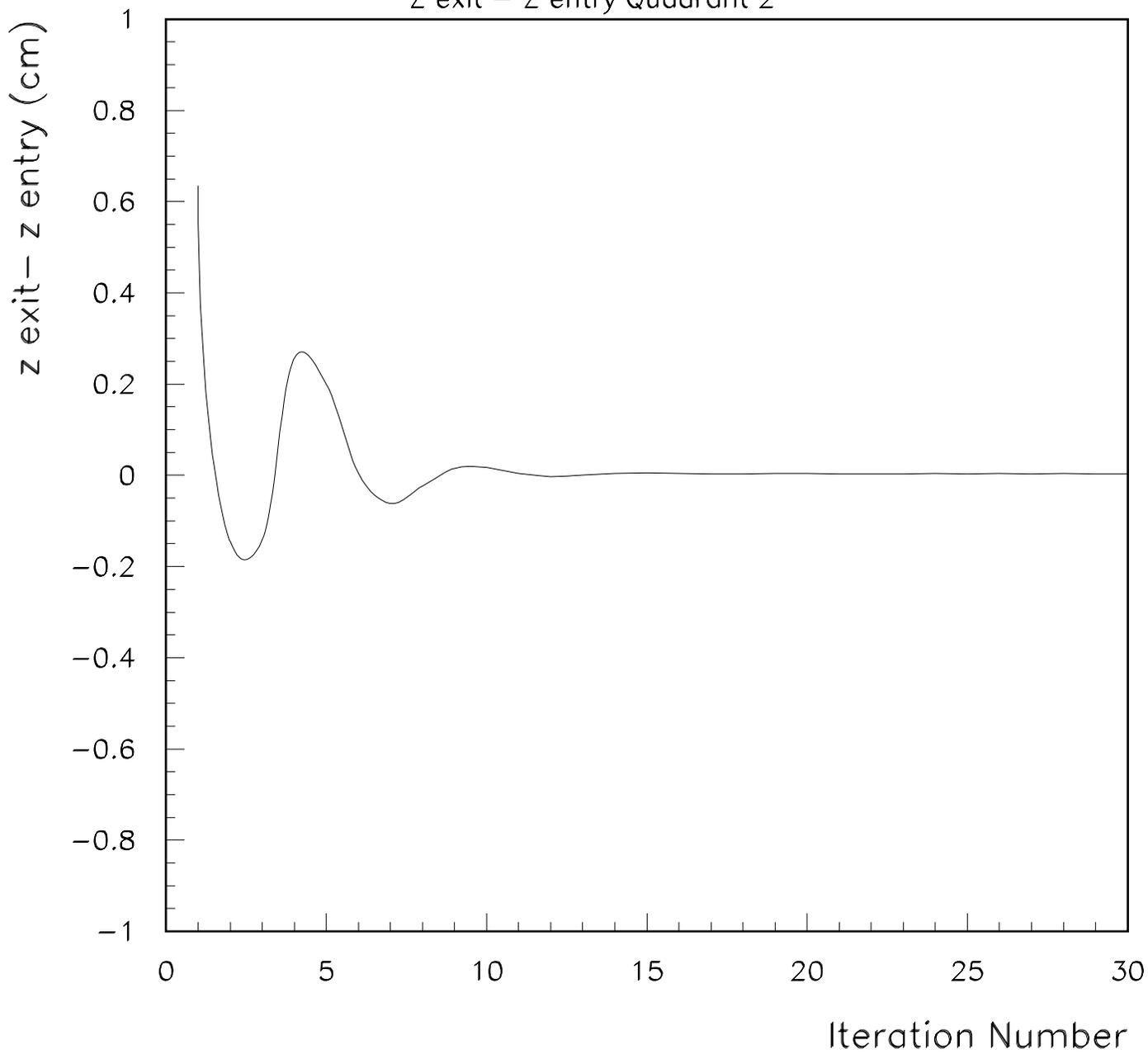
X exit - X entry Quadrant 3



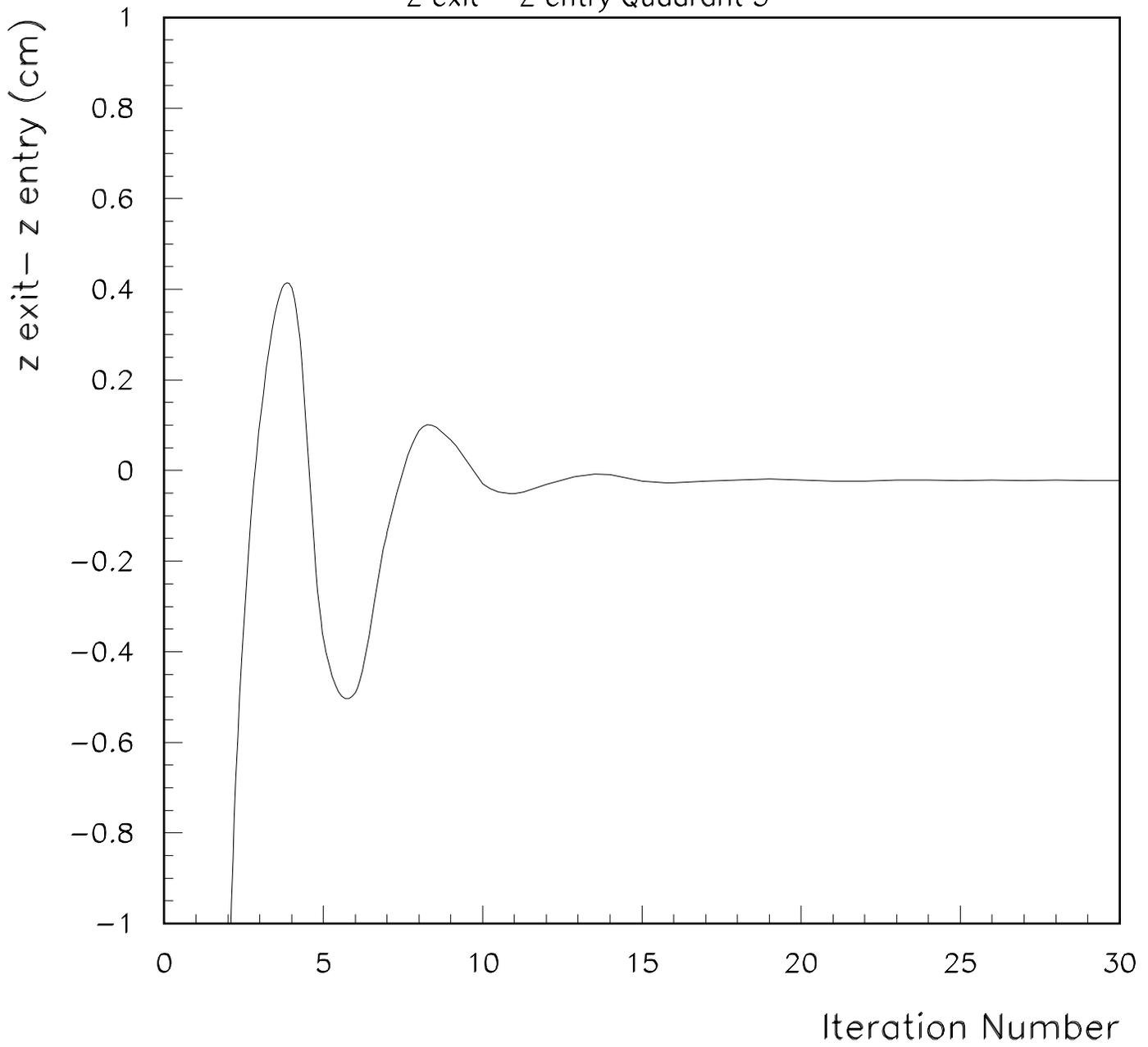




Z exit - Z entry Quadrant 2



Z exit - Z entry Quadrant 3



2003/02/26 12.48

